

**ABSTRACT**

***TRYPTOPHAN AS A FUNCTIONAL REPLACEMENT FOR ADP-RIBOSE-  
ARGININE IN RECOMBINANT PROTEINS***

5           A method is disclosed for producing a polypeptide with a modified activity or  
stability, by replacing an arginine residue capable of being ADP-ribosylated with a  
tryptophan or a phenylalanine. In one embodiment, compositions are provided that  
include polypeptides, such as alpha defensin, with arginine-to-tryptophan or arginine-  
to-phenylalanine substitutions, where the arginine residue is capable of being ADP-  
10   ribosylated. In another embodiment, methods are disclosed for modifying an immune  
response in a subject.